

AMENDMENTS TO THE CLAIMS

Please amend claim 2 and add claims 10 through 14, as follows:

1 1. (Original) A cathode material for an electron beam apparatus, the cathode material
2 consisting essentially of:

3 a rare earth metal of the cerium group comprising 0.5% to 9.0% of the total weight of the
4 cathode material;

5 at least one element selected from the group consisting of tungsten and rhenium, comprising
6 0.5% to 15.0% of the total weight of the cathode material;

7 carbon comprising 0.5% to 10% of the total weight of the cathode material; and
8 iridium.

1 2. (Currently Amended) The cathode material of claim 1, with the rare earth metal of the
2 cerium group being at least one element selected from the group consisting of ~~lanthanum~~ lanthanum,
3 cerium, praseodymium, neodymium and samarium.

1 3. (Original) The cathode material of claim 1, with the carbon content being 2% to 5% by
2 weight based on the total weight of the cathode material.

1 4. (Original) The cathode material of claim 1, with about 6% by weight of a rare earth metal

2 of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and
3 about 3% by weight of carbon, based on the total weight of the cathode material.

1 5. (Original) A cathode material for an electron beam apparatus, comprising:
2 a rare earth metal of the cerium group;
3 at least one element selected from the group consisting of tungsten and rhenium;
4 carbon of about 0.5% to about 10% of the total weight of the cathode material; and
5 iridium.

1 6. (Original) The cathode material of claim 5, with the rare earth metal of the cerium group
2 of about 0.5% to about 9.0% of the total weight of the cathode material.

1 7. (Original) The cathode material of claim 6, with the carbon content being about 2% to
2 about 5% by weight based on the total weight of the cathode material.

1 8. (Original) The cathode material of claim 6, with at least one element selected from the
2 group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight
3 of the cathode material.

1 9. (Original) The cathode material of claim 8, with the carbon content being about 2% to
2 about 5% by weight based on the total weight of the cathode material.

1 10. (New) The cathode material of claim 2, with the carbon content being 2% to 5% by
2 weight based on the total weight of the cathode material.

1 11. (New) The cathode material of claim 2, with about 6% by weight of a rare earth metal
2 of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and
3 about 3% by weight of carbon, based on the total weight of the cathode material.

1 12. (New) The cathode material of claim 5, with the carbon content being about 2% to about
2 5% by weight based on the total weight of the cathode material.

1 13. (New) The cathode material of claim 12, with at least one element selected from the
2 group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight
3 of the cathode material.

1 14. (New) The cathode material of claim 5, with at least one element selected from the group
2 consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight of
3 the cathode material.